

WHAT IS CLAIMED IS:

1. A method of treating or delaying the onset of an angiogenic-associated disorder, said method comprising administering to a subject in need thereof an antibody to the polypeptide of SEC1 in an amount sufficient to treat or prevent said angiogenic-associated disorder in said subject.
2. The method of claim 1 wherein the subject is a human.
3. The method of claim 1 wherein the angiogenic-associated disorder is selected from the group consisting of a cancer, cardiovascular disease, psoriasis, wound healing, and stroke.
4. The method of claim 1 wherein the angiogenic-associated disorder comprises endothelial cell adhesion to an extracellular matrix protein.
5. The method of claim 4 wherein the extracellular matrix protein is fibronectin or vitronectin.
6. A method for determining the presence of or predisposition to a disease associated with altered levels of SEC1 in a first mammalian subject, said method comprising:
 - (a) providing a protein sample from said first mammalian subject;
 - (b) providing a control protein sample from a second mammalian subject known not to have or be predisposed to said disease;
 - (c) measuring the amount of SEC1 polypeptide in said subject sample; and
 - (d) comparing the amount of SEC1 polypeptide in said subject protein sample to the amount of SEC1 polypeptide in said control protein sample,

wherein an alteration in the expression level of the SEC1 polypeptide in the first subject sample as compared to the control sample indicates the presence or predisposition to said disease.

7. A method for determining the presence of or predisposition to a disease associated with altered levels of the nucleic acid of SEC1 in a first mammalian subject, said method comprising:

- (a) providing a nucleic acid sample from said first mammalian subject;
- (b) providing a control nucleic acid sample from a second mammalian subject known not to have or be predisposed to said disease;
- (c) measuring the amount of SEC1 nucleic acid in said subject sample; and
- (d) comparing the amount of SEC1 nucleic acid in said subject nucleic acid sample to the amount of SEC1 nucleic acid in said control nucleic acid sample,

wherein an alteration in the expression level of the SEC1 nucleic acid in the first subject sample as compared to the control sample indicates the presence or predisposition to said disease.

8. A method of treating a pathological state in a mammal, the method comprising administering to the mammal a SEC1 polypeptide in an amount sufficient to alleviate the pathological state, wherein the polypeptide has an amino acid sequence at least 95% identical to the SEC1 polypeptide, or a biologically active fragment thereof.
9. A method of treating a pathological state in a mammal, the method comprising administering to the mammal an antibody to a SEC1 polypeptide in an amount sufficient to alleviate the pathological state.
10. The method of claim 8 wherein the pathological state is selected from the group consisting of a cancer, cardiovascular disease, psoriasis, wound healing, and stroke.
11. The method of claim 8 wherein the pathological state comprises endothelial cell adhesion to an extracellular matrix protein.
12. The method of claim 11 wherein the extracellular matrix protein is fibronectin or vitronectin.
13. A method of treating or delaying the onset of a disorder, said method comprising administering to a subject in need thereof an antibody to the polypeptide of SEC1, SEC2, SEC3, SEC4, SEC5, SEC6, SEC7, SEC8, SEC9, SEC10, SEC11, or SEC12 in an amount sufficient to treat or prevent said disorder in said subject.

14. A method of treating a pathological state in a mammal, the method comprising administering to the mammal a SEC1, SEC2, SEC3, SEC4, SEC5, SEC6, SEC7, SEC8, SEC9, SEC10, SEC11, or SEC12 polypeptide in an amount sufficient to alleviate the pathological state, wherein the polypeptide has an amino acid sequence at least 95% identical to the SEC1, SEC2, SEC3, SEC4, SEC5, SEC6, SEC7, SEC8, SEC9, SEC10, SEC11, or SEC12 polypeptide, or a biologically active fragment thereof.

15. A method for determining the presence of or predisposition to a disease associated with altered levels of SEC1, SEC2, SEC3, SEC4, SEC5, SEC6, SEC7, SEC8, SEC9, SEC10, SEC11, or SEC12 in a first mammalian subject, said method comprising
 - (a) Providing a sample from said first mammalian subject;
 - (b) Providing a control sample from a second mammalian subject known not to have or be predisposed to said disease;
 - (c) Measuring the amount of SEC1, SEC2, SEC3, SEC4, SEC5, SEC6, SEC7, SEC8, SEC9, SEC10, SEC11, or SEC12 in said subject sample; and
 - (d) Comparing the amount of SEC1, SEC2, SEC3, SEC4, SEC5, SEC6, SEC7, SEC8, SEC9, SEC10, SEC11, or SEC12 in said subject protein sample to the amount of SEC1, SEC2, SEC3, SEC4, SEC5, SEC6, SEC7, SEC8, SEC9, SEC10, SEC11, or SEC12 in said control sample,
 wherein an alteration in the expression level of the SEC1, SEC2, SEC3, SEC4, SEC5, SEC6, SEC7, SEC8, SEC9, SEC10, SEC11, or SEC12 in the first subject sample as compared to the control sample indicates the presence or predisposition to said disease.

16. An isolated polypeptide comprising an amino acid sequence selected from the group consisting of:
 - (a) a mature form of an amino acid sequence selected from the group consisting of SEQ ID NOS:26, 28, 30, 32, 34, 36, 38 and 40;
 - (b) a variant of a mature form of an amino acid sequence selected from the group consisting of SEQ ID NOS:26, 28, 30, 32, 34, 36, 38 and 40, wherein one or more amino acid residues in said variant differs from the amino acid sequence of said mature form, provided that said variant differs in no more than 15% of the amino acid residues from the amino acid sequence of said mature form;

- (c) an amino acid sequence selected from the group consisting SEQ ID NOS:26, 28, 30, 32, 34, 36, 38 and 40; and
 - (d) a variant of an amino acid sequence selected from the group consisting of SEQ ID NOS:26, 28, 30, 32, 34, 36, 38 and 40, wherein one or more amino acid residues in said variant differs from the amino acid sequence of said mature form, provided that said variant differs in no more than 15% of amino acid residues from said amino acid sequence.
17. The polypeptide of claim 16, wherein said polypeptide comprises the amino acid sequence of a naturally-occurring allelic variant of an amino acid sequence selected from the group consisting SEQ ID NOS:26, 28, 30, 32, 34, 36, 38 and 40.
18. The polypeptide of claim 16, wherein said allelic variant comprises an amino acid sequence that is the translation of a nucleic acid sequence differing by a single nucleotide from a nucleic acid sequence selected from the group consisting of SEQ ID NOS:25, 27, 29, 31, 33, 35, 37 and 39.
19. The polypeptide of claim 16, wherein the amino acid sequence of said variant comprises a conservative amino acid substitution.
20. An isolated nucleic acid molecule comprising a nucleic acid sequence encoding a polypeptide comprising an amino acid sequence selected from the group consisting of:
- (a) a mature form of an amino acid sequence selected from the group consisting of SEQ ID NOS:26, 28, 30, 32, 34, 36, 38 and 40;
 - (b) a variant of a mature form of an amino acid sequence selected from the group consisting of SEQ ID NOS:26, 28, 30, 32, 34, 36, 38 and 40, wherein one or more amino acid residues in said variant differs from the amino acid sequence of said mature form, provided that said variant differs in no more than 15% of the amino acid residues from the amino acid sequence of said mature form;
 - (c) an amino acid sequence selected from the group consisting of SEQ ID NOS:26, 28, 30, 32, 34, 36, 38 and 40;
 - (d) a variant of an amino acid sequence selected from the group consisting SEQ ID NOS:26, 28, 30, 32, 34, 36, 38 and 40, wherein one or more amino acid residues in said variant differs from the amino acid sequence of said mature form, provided

that said variant differs in no more than 15% of amino acid residues from said amino acid sequence;

- (e) a nucleic acid fragment encoding at least a portion of a polypeptide comprising an amino acid sequence chosen from the group consisting of SEQ ID NOS:26, 28, 30, 32, 34, 36, 38 and 40, or a variant of said polypeptide, wherein one or more amino acid residues in said variant differs from the amino acid sequence of said mature form, provided that said variant differs in no more than 15% of amino acid residues from said amino acid sequence; and
- (f) a nucleic acid molecule comprising the complement of (a), (b), (c), (d) or (e).

21. The nucleic acid molecule of claim 20, wherein the nucleic acid molecule comprises the nucleotide sequence of a naturally-occurring allelic nucleic acid variant.
22. The nucleic acid molecule of claim 20, wherein the nucleic acid molecule encodes a polypeptide comprising the amino acid sequence of a naturally-occurring polypeptide variant.
23. The nucleic acid molecule of claim 20, wherein the nucleic acid molecule differs by a single nucleotide from a nucleic acid sequence selected from the group consisting of SEQ ID NOS:25, 27, 29, 31, 33, 35, 37 and 39.
24. The nucleic acid molecule of claim 20, wherein said nucleic acid molecule comprises a nucleotide sequence selected from the group consisting of:
 - (a) a nucleotide sequence selected from the group consisting of SEQ ID NOS:25, 27, 29, 31, 33, 35, 37 and 39;
 - (b) a nucleotide sequence differing by one or more nucleotides from a nucleotide sequence selected from the group consisting of SEQ ID NOS:25, 27, 29, 31, 33, 35, 37 and 39, provided that no more than 20% of the nucleotides differ from said nucleotide sequence;
 - (c) a nucleic acid fragment of (a); and
 - (d) a nucleic acid fragment of (b).
25. The nucleic acid molecule of claim 20, wherein said nucleic acid molecule hybridizes under stringent conditions to a nucleotide sequence chosen from the group consisting

SEQ ID NOS:25, 27, 29, 31, 33, 35, 37 and 39, or a complement of said nucleotide sequence.

26. The nucleic acid molecule of claim 20, wherein the nucleic acid molecule comprises a nucleotide sequence selected from the group consisting of:
 - (a) a first nucleotide sequence comprising a coding sequence differing by one or more nucleotide sequences from a coding sequence encoding said amino acid sequence, provided that no more than 20% of the nucleotides in the coding sequence in said first nucleotide sequence differ from said coding sequence;
 - (b) an isolated second polynucleotide that is a complement of the first polynucleotide; and
 - (c) a nucleic acid fragment of (a) or (b).
27. A vector comprising the nucleic acid molecule of claim 26.
28. The vector of claim 27, further comprising a promoter operably-linked to said nucleic acid molecule.
29. A cell comprising the vector of claim 27.
30. An antibody that binds immunospecifically to the polypeptide of claim 16.
31. The antibody of claim 30, wherein said antibody is a monoclonal antibody.
32. The antibody of claim 30, wherein the antibody is a humanized antibody.
33. A method for determining the presence or amount of the polypeptide of claim 16 in a sample, the method comprising:
 - (a) providing the sample;
 - (b) contacting the sample with an antibody that binds immunospecifically to the polypeptide; and
 - (c) determining the presence or amount of antibody bound to said polypeptide, thereby determining the presence or amount of polypeptide in said sample.

34. A method for determining the presence or amount of the nucleic acid molecule of claim 16 in a sample, the method comprising:
- (a) providing the sample;
 - (b) contacting the sample with a probe that binds to said nucleic acid molecule; and
 - (c) determining the presence or amount of the probe bound to said nucleic acid molecule,
- thereby determining the presence or amount of the nucleic acid molecule in said sample.
35. The method of claim 34 wherein presence or amount of the nucleic acid molecule is used as a marker for cell or tissue type.
36. The method of claim 35 wherein the cell or tissue type is cancerous.
37. A method of identifying an agent that binds to a polypeptide of claim 16, the method comprising:
- (a) contacting said polypeptide with said agent; and
 - (b) determining whether said agent binds to said polypeptide.
38. The method of claim 37 wherein the agent is a cellular receptor or a downstream effector.
39. A method for identifying an agent that modulates the expression or activity of the polypeptide of claim 16, the method comprising:
- (a) providing a cell expressing said polypeptide;
 - (b) contacting the cell with said agent, and
 - (c) determining whether the agent modulates expression or activity of said polypeptide,
- whereby an alteration in expression or activity of said peptide indicates said agent modulates expression or activity of said polypeptide.
40. A method for modulating the activity of the polypeptide of claim 16, the method comprising contacting a cell sample expressing the polypeptide of said claim with a compound that binds to said polypeptide in an amount sufficient to modulate the activity of the polypeptide.

41. A method of treating or preventing a NOVX-associated disorder, said method comprising administering to a subject in which such treatment or prevention is desired the polypeptide of claim 16 in an amount sufficient to treat or prevent said NOVX-associated disorder in said subject.
42. The method of claim 41 wherein the disorder is selected from the group consisting of cardiomyopathy and atherosclerosis.
43. The method of claim 41 wherein the disorder is related to cell signal processing and metabolic pathway modulation.
44. The method of claim 41, wherein said subject is a human.
45. A method of treating or preventing a NOVX-associated disorder, said method comprising administering to a subject in which such treatment or prevention is desired the nucleic acid of claim 20 in an amount sufficient to treat or prevent said NOVX-associated disorder in said subject.
46. The method of claim 45 wherein the disorder is selected from the group consisting of cardiomyopathy and atherosclerosis.
47. The method of claim 45 wherein the disorder is related to cell signal processing and metabolic pathway modulation.
48. The method of claim 45, wherein said subject is a human.
49. A method of treating or preventing a NOVX-associated disorder, said method comprising administering to a subject in which such treatment or prevention is desired the antibody of claim 30 in an amount sufficient to treat or prevent said NOVX-associated disorder in said subject.
50. The method of claim 49 wherein the disorder is diabetes.

51. The method of claim 49 wherein the disorder is related to cell signal processing and metabolic pathway modulation.
52. The method of claim 49, wherein the subject is a human.
53. A pharmaceutical composition comprising the polypeptide of claim 16 and a pharmaceutically-acceptable carrier.
54. A pharmaceutical composition comprising the nucleic acid molecule of claim 20 and a pharmaceutically-acceptable carrier.
55. A pharmaceutical composition comprising the antibody of claim 30 and a pharmaceutically-acceptable carrier.
56. A kit comprising in one or more containers, the pharmaceutical composition of claim 53.
57. A kit comprising in one or more containers, the pharmaceutical composition of claim 54.
58. A kit comprising in one or more containers, the pharmaceutical composition of claim 55.
59. A method for determining the presence of or predisposition to a disease associated with altered levels of the polypeptide of claim 16 in a first mammalian subject, the method comprising:
 - (a) measuring the level of expression of the polypeptide in a sample from the first mammalian subject; and
 - (b) comparing the amount of said polypeptide in the sample of step (a) to the amount of the polypeptide present in a control sample from a second mammalian subject known not to have, or not to be predisposed to, said disease;wherein an alteration in the expression level of the polypeptide in the first subject as compared to the control sample indicates the presence of or predisposition to said disease.
60. The method of claim 59 wherein the predisposition is to a cancer.

61. A method for determining the presence of or predisposition to a disease associated with altered levels of the nucleic acid molecule of claim 20 in a first mammalian subject, the method comprising:
- (a) measuring the amount of the nucleic acid in a sample from the first mammalian subject; and
 - (b) comparing the amount of said nucleic acid in the sample of step (a) to the amount of the nucleic acid present in a control sample from a second mammalian subject known not to have or not be predisposed to, the disease;

wherein an alteration in the level of the nucleic acid in the first subject as compared to the control sample indicates the presence of or predisposition to the disease.

62. The method of claim 61 wherein the predisposition is to a cancer.

63. A method of treating a pathological state in a mammal, the method comprising administering to the mammal a polypeptide in an amount that is sufficient to alleviate the pathological state, wherein the polypeptide is a polypeptide having an amino acid sequence at least 95% identical to a polypeptide comprising an amino acid sequence of at least one of SEQ ID NOS:26, 28, 30, 32, 34, 36, 38 and 40, or a biologically active fragment thereof.

64. A method of treating a pathological state in a mammal, the method comprising administering to the mammal the antibody of claim 30 in an amount sufficient to alleviate the pathological state.